

# Allan Kagimu Ssebatta

Detail-oriented and highly motivated Software Developer with strong foundations in Python, frontend & backend development, and database systems. Experienced in building secure authentication systems, Cyber security, APIs, and IoT-enabled applications using tools such as MySQL. Committed to continuous learning and applying modern technologies to solve practical challenges. <https://github.com/Allan-sebz>

Allan Kagimu  
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## EXPERIENCE

### Uganda Industrial Research Institute (UIRI), Namanve — *Internship*

MAY 22nd - JULY 18th

1. Assisted in the design, development, and testing of embedded systems and IoT-based prototypes using microcontrollers such as Arduino and NodeMCU. Participated in integrating sensors (smoke, ultrasonic, LDR) with actuators including buzzers, servo motors, and LCD displays.
2. Supported backend development tasks, including configuring development environments, implementing authentication logic, and working with structured databases such as MySQL for secure data storage and retrieval.
3. Contributed to system architecture planning by designing flowcharts and logical diagrams for technical projects, ensuring proper data flow and component interaction.
4. Conducted troubleshooting, debugging, and hardware–software integration testing to improve system reliability and performance.
5. Collaborated with engineers and fellow interns on research-driven projects focused on automation, smart systems, and practical industrial solutions.

### Vision Africa, Kayunga— *Computer Maintenance and repair Intern*

24th MAY, 2024

Installed and configured hardware and software components to ensure optimal performance.

- Maintained a clean working environment by organizing cables, labeling devices, and keeping workstations tidy.
- Created detailed documentation of system configurations, troubleshooting procedures, and user guides.
- Restored performance by completing basic repairs of hardware, software and equipment.

Diagnosed and resolved faults based on technical knowledge and use of pre-scripted repair trees.

## SKILLS

1. Programming Languages: (Python, C, C++, Javascript, HTML, CSS)
2. Embedded systems
3. Local Area Networking
4. Data Analytics and Visualization
5. Cybersecurity and Digital Forensic
6. Web Application Programming (Frontend and Backend)
7. Mobile App development
8. Machine Learning
9. Big Data Analytics

## AWARDS

Certificate of Excellence - First Position at the

## **Seroma Christian High School, Mukono — *Computer Maintenance and repair Intern***

5th FEBRUARY, 2024

Installed and configured hardware and software components to ensure optimal performance.

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- Created detailed documentation of system configurations, troubleshooting procedures, and user guides.
- Restored performance by completing basic repairs of hardware, software and equipment.

Diagnosed and resolved faults based on technical knowledge and use of pre-scripted repair trees.

### **EDUCATION**

#### **Uganda Christian University, Mukono — *Bachelor of science in computer science***

September 2023 - To date

#### **St. Julian High School, Gayaza — *Uganda Advanced Certificate of Education***

February 2020 - December 2022

#### **Setlight Quality Secondary School, Entebbe — *Uganda Certificate of education***

February 2016 - December 2019

### **PROJECTS**

#### **Vanguard — *Network Intrusion Detection System (NIDS) Design***

Designed the system flow and architecture for a Network Intrusion Detection System, including traffic monitoring, threat detection logic, and alert generation processes using structured flow diagrams.

#### **IoT Smoke Detection & Alert System — *Smart Safety Automation Project***

Built a smoke detection system using Arduino and NodeMCU with ultrasonic sensors, buzzer alerts, servo control, LEDs, and LCD display. Integrated IoT functionality to send real-time alerts and sensor data to a mobile dashboard via Blynk.

### **LANGUAGES**

English

Luganda

### **REFEREES**

1. Dr. Innocent Ndibatya, Head of Computing And Technology Department, Uganda Christian University, Mukono, Email:[indibatya@ucu.ac.ug](mailto:indibatya@ucu.ac.ug)
2. Mr. Kasole Ahmed, lecturer ucu [akasole@ucu.ac.ug](mailto:akasole@ucu.ac.ug) +256 780 573769

## **Edge-Enabled Smart Irrigation System** — *IoT & Edge Computing Project*

Developed an IoT-based smart irrigation system for smallholder farmers using edge computing principles. Integrated sensors, microcontrollers, and real-time monitoring to optimize water usage and improve farming efficiency.

## **Secure Authentication System** — *Backend Login & Registration Application*

Designed and implemented a secure user authentication system with registration and login functionality. Integrated password hashing, JSON-based credential storage, and structured backend logic using Python.